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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

COHEN, AMY R

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,756	Applicant(s) HONMA ET AL.	
	Examiner Amy R. Cohen	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 16-19, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 10-15 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/17/06; 1/04/07</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 1-6, 16, 17, 21, 22 are objected to because of the following informalities:

Claims 1-5: Claim language “along the movement route of the needle pointer” is unclear since it is unclear how the needle pointer and the light source can be in the same movement route while the needle pointer is moving.

Claims 1-5: Claim language “light source” should read light source means since light source means better describes how Applicant is using the term.

Claim 1, line 25 “illumination means” should read “the light source” in order to have consistent claim language.

Claim 6 claim language is unclear since it depends from claim 1 but claim 6 recites “the plural light sources” which is only claimed in one option of the claim language of claim 1. It appears that claim 6 should depend from claim 2.

Claim 16 claim language is unclear since it depends from claim 1 but claim 16 recites “the light transmissive body” which is only claimed in one option of the claim language of claim 1. It appears that claim 16 should depend from claim 5.

Claim 17 claim language is unclear since it depends from claim 1 but claim 17 recites “the light transmissive body” which is only claimed in one option of the claim language of claim 1. It appears that claim 17 should depend from claim 5.

Claim 21 claim language is unclear because it appears that the claim should read that the drive device is a gear wheel, not that the movable body is a gear wheel. For purposes of prosecution, Examiner interprets the claim language to read that the drive device is a gear wheel.

Claim 22 claim language is unclear because it appears that the claim should read that the drive device is a belt-shaped body, not that the movable body is a belt-shaped body. For

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purposes of prosecution, Examiner interprets the claim language to read that the drive device is a belt-shaped body.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al. (U. S. Patent No. 6,484,663) in view of Ohta et al. (U. S. Patent No. 5,529,014).

Zech et al. discloses a needle pointer type meter, comprising: an index plate (10) having a first through-vision section and indexes (10) surrounding the first through-vision section (Fig. 2, Col 4, lines 15-28); a movable body (2) having a second through-vision section (Fig. 1, Col 4, lines 5-14, lines 29-34); a drive device (3) for moving the movable body (Col 3, line 65-Col 4, line 14); a needle pointer (4) which is attached to the movable body (2) and moves along the indexes around the first through-vision section (Col 3, line 65-Col 4, line 14); a light source for illuminating the needle pointer (Col 3, lines 42-51); and a display device (9) for displaying predetermined information to an observer through the first and second through-vision sections (Fig. 2, Col 4, lines 15-28).

Zech et al. discloses the needle pointer type meter characterized in that the movable body is a gear wheel (5, 6), which is rotated by the drive device (Col 4, lines 1-14).

Zech et al. does not disclose the needle pointer type meter characterized in that the light source is formed by a pipe-shaped light emitting body disposed along the movement route of the needle pointer, and the needle pointer is made of light-transmissive material which receives light from a particular light-emitting region of the light source in accordance with the movement of the needle pointer so that the needle pointer can emit light.

Ohta et al. discloses a meter characterized in that the light source is formed by a pipe-shaped light emitting body (10) disposed along the movement route of the needle pointer, and the needle pointer (8, 9) is made of light-transmissive material which receives light from a particular light-emitting region of the light source in accordance with the movement of the needle pointer so that the needle pointer can emit light (Col 6, lines 1-24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify a light source in the needle pointer type meter of Zach et al., as taught by Ohta et al., in order to evenly illuminate both the index plate and the needle pointer with one uniform light source, providing an even appearance of the light emitted through the index plate and the needle pointer, and since Zech et al. discloses illuminating the meter (Col 3, lines 42-51).

4. Claims 1, 5, 8, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al. in view of Shi (U. S. Patent No. 6,206,533).

Zech et al. discloses a needle pointer type meter, comprising: an index plate (10) having a first through-vision section and indexes (10) surrounding the first through-vision section (Fig. 2, Col 4, lines 15-28); a movable body (2) having a second through-vision section (Fig. 1, Col 4, lines 5-14, lines 29-34); a drive device (3) for moving the movable body (Col 3, line 65-Col 4, line 14); a needle pointer (4) which is attached to the movable body (2) and moves along the indexes around the first through-vision section (Col 3, line 65-Col 4, line 14); a light source for illuminating the needle pointer (Col 3, lines 42-51); and a display device (9) for displaying

predetermined information to an observer through the first and second through-vision sections (Fig. 2, Col 4, lines 15-28).

Zech et al. discloses the needle pointer type meter characterized in that the first through-vision section is formed by a penetrating portion (Col 4, lines 23-28).

Zech et al. discloses the needle pointer type meter characterized in that the movable body is a gear wheel (5, 6), which is rotated by the drive device (Col 4, lines 1-14).

Zech et al. does not disclose the needle pointer type meter characterized in that the light source is formed by a light transmissive body disposed along the movement route of the needle pointer and a light source for supplying light such that the light transmissive body can emit light, and the needle pointer is made of light-transmissive material which receives light from a particular light-emitting region of the light transmissive body in accordance with the movement of the needle pointer so that the needle pointer can emit light.

Shi discloses a needle pointer type meter characterized in that the light source is formed by a light transmissive body (22) disposed along the movement route of the needle pointer and a light source (32) for supplying light such that the light transmissive body can emit light, and the needle pointer (18) is made of light-transmissive material which receives light from a particular light-emitting region of the light transmissive body in accordance with the movement of the needle pointer so that the needle pointer can emit light (Figs. 1 and 2, Col 2, lines 54-65, Col 3, lines 10-24); wherein the light transmissive body is disposed on the outer periphery of the indexes and at an inner position from the surface of the index plate such that a light supplying portion for supplying light to the needle pointer faces to a first through-vision section (Figs. 1 and 2, Col 2, lines 8-53); and the needle pointer has a light introduction portion which extends between the light transmissive body and the first through-vision section along the back surface of the index plate to introduce light emitted from the light supplying portion of the light

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transmissive body toward the first through-vision section, an indicator which extends between the first through-vision section and the light transmissive body along the front surface of the index plate to indicate the indexes, and an intermediate portion which connects the indicator and the light introduction portion on the first through-vision section side and introduces light coming from the light introduction portion to the indicator so that the indicator can emit light (Figs. 1 and 2, Col 2, lines 54-65, Col 3, lines 10-24, the various parts of the needle pointer are not individually numbered, however, in order to connect the needle pointer with the light transmissive body, the claimed parts of the needle pointer must be present).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify a light source in the needle pointer type meter of Zach et al., as taught by Shi, in order to evenly illuminate both the index plate and the needle pointer with one uniform light source, providing an even appearance of the light emitted through the index plate and the needle pointer, and since Zech et al. discloses illuminating the meter (Col 3, lines 42-51).

5. Claims 1, 2, 5, 6, 9, 16, 18, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al. in view of Quigley et al. (U. S. Patent No. 6,718,906) and in view of Shi.

Zech et al. discloses a needle pointer type meter, comprising: an index plate (10) having a first through-vision section and indexes (10) surrounding the first through-vision section (Fig. 2, Col 4, lines 15-28); a movable body (2) having a second through-vision section (Fig. 1, Col 4, lines 5-14, lines 29-34); a drive device (3) for moving the movable body (Col 3, line 65-Col 4, line 14); a needle pointer (4) which is attached to the movable body (2) and moves along the indexes around the first through-vision section (Col 3, line 65-Col 4, line 14); a light source for illuminating the needle pointer (Col 3, lines 42-51); and a display device (9) for displaying predetermined information to an observer through the first and second through-vision sections (Fig. 2, Col 4, lines 15-28).

Zech et al. discloses the needle pointer type meter characterized in that the first through-vision section is formed by a penetrating portion (Col 4, lines 23-28).

Zech et al. discloses the needle pointer type meter characterized in that the movable body is a gear wheel (5, 6), which is rotated by the drive device (Col 4, lines 1-14).

Zech et al. does not disclose the needle pointer type meter characterized in that the light source is formed by a plurality of light sources disposed at certain intervals along the movement route of the needle pointer, and the needle pointer is made of a light transmissive material which receives light from a given light source of the plurality of light sources in accordance with the movement of the needle pointer so that the needle pointer can emit light.

Quigley et al. discloses a needle pointer type meter characterized in that the light source is formed by a plurality of light sources (16, 18, 48, 52, 58, 74, 78) disposed at certain intervals along the movement route of the needle pointer (Figs. 6, 10, 11B, Col 5, lines 10-45, Col 5, line 54-Col 6, line 15); and in that illumination means is formed by a light transmissive body (50, 54, 60, 76, 80) disposed along the movement route of the needle pointer and a light source (48, 52, 58, 74, 78) for supplying light such that the light transmissive body can emit light (Figs. 6, 10, 11B, Col 5, lines 10-45, Col 5, line 54-Col 6, line 15); the plural light sources are disposed on the outer periphery of the indexes and at inner positions from the surface of the index plate such that respective light-emitting portions of the light sources face to the first through-vision section (Figs. 6, 10, 11A,B, Col 5, lines 10-45, Col 5, line 54-Col 6, line 15); the light transmissive body is formed by a circular-arc-shaped flat plate extending along the movement route of the needle pointer; and the light source is opposed to the inner or outer peripheral edge of the circular-arc-shaped flat plate (Figs. 10, 11B); wherein a condensing section for condensing light emitted from the light source is provided on the light transmissive body at the position opposed to the light source (Col 5, lines 10-45, Col 5, line 54-Col 6, line 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify a light source in the needle pointer type meter of Zach et al., as taught by Quigley et al., in order to evenly illuminate the index plate, attracting the attention of the user, especially in low light conditions and since Zech et al. discloses illuminating the meter (Col 3, lines 42-51).

Shi discloses a needle pointer type meter characterized in that the light source is formed by a light transmissive body (22) disposed along the movement route of the needle pointer and a light source (32) for supplying light such that the light transmissive body can emit light, and the needle pointer (18) is made of light-transmissive material which receives light from a particular light-emitting region of the light transmissive body in accordance with the movement of the needle pointer so that the needle pointer can emit light (Figs. 1 and 2, Col 2, lines 54-65, Col 3, lines 10-24); wherein the light transmissive body is disposed on the outer periphery of the indexes and at an inner position from the surface of the index plate such that a light supplying portion for supplying light to the needle pointer faces to a first through-vision section (Figs. 1 and 2, Col 2, lines 8-53); and the needle pointer has a light introduction portion which extends between the light transmissive body and the first through-vision section along the back surface of the index plate to introduce light emitted from the light supplying portion of the light transmissive body toward the first through-vision section, an indicator which extends between the first through-vision section and the light transmissive body along the front surface of the index plate to indicate the indexes, and an intermediate portion which connects the indicator and the light introduction portion on the first through-vision section side and introduces light coming from the light introduction portion to the indicator so that the indicator can emit light; wherein the light introduction portion extends from the intermediate portion forming a sector (Figs. 1 and 2, Col 2, lines 54-65, Col 3, lines 10-24, the various parts of the needle pointer are not

individually numbered, however, in order to connect the needle pointer with the light transmissive body, the claimed parts of the needle pointer must be present).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the needle pointer of Zech et al. and Quigley et al. be of a light transmissive material, as taught by Shi, in order to further emphasize the position of the needle pointer by having it also emit light, thereby attracting greater attention from the user.

With respect to claim 17: the shapes of the light transmissive body, i.e., circular-arc-shaped flat plate portion extending along the movement route and a pipe-shaped portion extending in a direction different from that of the flat plate portion, absent any criticality, are only considered to be obvious modifications of the shape of the light transmissive body disclosed by Zech et al., Quigley et al., and Shi as the courts have held that a change in shape or configuration, without any criticality, is within the level of skill in the art as the particular shape claimed by Applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide using routine experimentation based on its suitability for the intended use of the invention. See *In re Dailey*, 149 USPQ 47 (CCPA 1976). Therefore, it would have been obvious to one of ordinary skill in the art to have the light transmissive body be circular-arc-shaped flat plate portion extending along the movement route with a pipe-shaped portion extending in a different direction since this configuration will serve the same purpose of providing light along the light transmissive body which is then transmitted to the index plate and the pointer.

6. Claims 1, 3, 7, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al. in view of Adelson et al. (U. S. Patent No. 6,320,500) in view of Shi.

Zech et al. discloses a needle pointer type meter, comprising: an index plate (10) having a first through-vision section and indexes (10) surrounding the first through-vision section (Fig. 2,

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Col 4, lines 15-28); a movable body (2) having a second through-vision section (Fig. 1, Col 4, lines 5-14, lines 29-34); a drive device (3) for moving the movable body (Col 3, line 65-Col 4, line 14); a needle pointer (4) which is attached to the movable body (2) and moves along the indexes around the first through-vision section (Col 3, line 65-Col 4, line 14); a light source for illuminating the needle pointer (Col 3, lines 42-51); and a display device (9) for displaying predetermined information to an observer through the first and second through-vision sections (Fig. 2, Col 4, lines 15-28).

Zech et al. discloses the needle pointer type meter characterized in that the first through-vision section is formed by a penetrating portion (Col 4, lines 23-28).

Zech et al. does not disclose the needle pointer type meter characterized in that the light source is formed by a belt-shaped planar light emitting body disposed along the movement route of the needle pointer, and the needle pointer is made of a light transmissive material which receives light from a given light source of the plurality of light sources in accordance with the movement of the needle pointer so that the needle pointer can emit light.

Adelsson et al. discloses a needle pointer type meter (10) characterized in that the light source is formed by a belt-shaped planar light emitting body (14, 15) disposed along the movement route of the needle pointer (Figs. 1 and 2, Col 2, lines 14-40); wherein the light source is supported by a belt-shaped flexible conductor (Figs. 1 and 2, Col 2, lines 14-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify a light source in the needle pointer type meter of Zach et al., as taught by Adelsson et al., in order to evenly illuminate the index plate, attracting the attention of the user, especially in low light conditions and since Zech et al. discloses illuminating the meter (Col 3, lines 42-51).

Shi discloses a needle pointer type meter characterized in that the light source is formed by a light transmissive body (22) disposed along the movement route of the needle pointer and a light source (32) for supplying light such that the light transmissive body can emit light, and the needle pointer (18) is made of light-transmissive material which receives light from a particular light-emitting region of the light transmissive body in accordance with the movement of the needle pointer so that the needle pointer can emit light (Figs. 1 and 2, Col 2, lines 54-65, Col 3, lines 10-24); wherein the light transmissive body is disposed on the outer periphery of the indexes and at an inner position from the surface of the index plate such that a light supplying portion for supplying light to the needle pointer faces to a first through-vision section (Figs. 1 and 2, Col 2, lines 8-53); and the needle pointer has a light introduction portion which extends between the light transmissive body and the first through-vision section along the back surface of the index plate to introduce light emitted from the light supplying portion of the light transmissive body toward the first through-vision section, an indicator which extends between the first through-vision section and the light transmissive body along the front surface of the index plate to indicate the indexes, and an intermediate portion which connects the indicator and the light introduction portion on the first through-vision section side and introduces light coming from the light introduction portion to the indicator so that the indicator can emit light (Figs. 1 and 2, Col 2, lines 54-65, Col 3, lines 10-24, the various parts of the needle pointer are not individually numbered, however, in order to connect the needle pointer with the light transmissive body, the claimed parts of the needle pointer must be present).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the needle pointer of Zech et al. and Adelson et al. be of a light transmissive material, as taught by Shi, in order to further emphasize the position of the needle pointer by having it also emit light, thereby attracting greater attention from the user.

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7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zech et al. and Ohta et al. as applied to claims 1, 4, 21 above, and further in view of Shino et al. (U. S. Patent No. 4,194,587).

Zech et al. and Ohta et al. disclose the needle pointer type meter as described above in paragraph 3.

Zech et al. and Ohta et al. do not disclose the needle pointer type meter wherein the movable body is a belt-shaped body, which is moved along, in the longitudinal direction by the drive device.

Shino et al. discloses a needle pointer type meter wherein the movable body is a belt-shaped body (29) which is moved along in the longitudinal direction by the drive device (Fig. 3A, Col 3, lines 7-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the gear wheel mechanism of Zech et al. and Ohta et al. with a belt-shaped movable body, as taught by Shino et al., since Shino et al. teaches that the gear wheel mechanism and the belt-shaped mechanism are equivalent mechanisms for providing rotation of a needle pointer (Shino et al., Figs. 3A,B, Col 3, lines 7-45).

Allowable Subject Matter

8. Claims 10-15, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

9. The following is a statement of reasons for the indication of allowable subject matter:

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The prior art does not disclose or suggest a needle pointer type meter wherein a light introduction plate is disposed between the light introduction portion and the index plate or indexes and light emitted from the light source is introduced into the light introduction plate and the light introduction portion so that the indicator and the indexes can emit light in combination with the remaining limitations of the claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following disclose needle pointer type meters Takahashi et al. (US PG PUB 2002/0051356), Tanaka et al. (U. S. Patent No. 7,159,534), Schach et al. (U. S. Patent No. 7,126,564), Brandt et al. (U. S. Patent No. 7,015,986), Birman (U. S. Patent No. 7,048,397), Ikarashi et al. (U. S. Patent No. 6,959,995), Sugiyama et al. (U. S. Patent No. 6,817,310), Brandt (U. S. Patent No. 6,674,497), Noll (U. S. Patent No. 6,450,656), Ayers et al. (U. S. Patent No. 6,404,333), Iino et al. (U. S. Patent No. 5,259,333), Bacon (U. S. Patent No. 2,248,325).


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy R. Cohen whose telephone number is (571) 272-2238. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARC
June 20, 2007



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